

Pyramidula striatella Anth. Only a very few of this species taken near Missoula in June, 1897.

Pyramidula elrodi Pils. This beautiful shell has been termed by an admiring friend "the queen of the Pyramidulas." It has thus far been found only along the banks of McDonald lake in the Mission mountains of Montana, living on the crags and among the loose talus. The first collecting produced some forty specimens, all dead. During the summer of 1900 about three quarts were secured. It will be interesting to the reader to give some of the opinions regarding this shell. For beauty the quotation above is certainly very flattering. W. G. Binney writes, Oct. 12, 1900, "I call it a depressed form of Hemphill's *Wasatchensis*. You might make a dozen species out of my series, and feel like tearing your hair afterwards in despair!" Dr. W. H. Dall says "the shell is larger than any *strigosa* I ever saw, and differs in sculpture from any in our collection. *Strigosa*, var. *Hemphilli* has the same form, but its sculpture is predominantly spiral and the shell the usual size. Conchologically speaking, it is a coarsely sculptured form of Stearns' shell (*circumcarinata*)." Dr. H. A. Pilsbry considers it sufficiently different from any existing species to be described as a distinct species.

THE SHELL-BEARING MOLLUSCA OF RHODE ISLAND.

BY HORACE F. CARPENTER.

[*Conclusion.*]

210. *Anomia aculeata*, Gmel.

Shell small, round; beaks obtuse, terminal; surface covered with fine hairy, radiating lines on the upper or convex valve; lower valve thin, smooth and flat, color yellowish white or gray; interior shining; aperture circular. Length and height about one-half inch each.

Habitat from Long Island to Greenland and northern coasts of Europe, rare south of Cape Cod. It has been found at Greenport and Montauk, L. I. (S. Smith); Stonington, Conn., 4 to 5 fathoms; Off Gay Head, 10 fathoms, but as yet no specimens have been obtained in R. I. waters. Its station is among roots of fuci, attached to stones and shells.

211. *Anomia glabra*, Verrill, 1872.

Syn: *Anomia ephippium*, Gld. and American authors, non Linné. *Anomia electrica*, Gld. (Binney's), non Linné. *Anomia squamula*, Gld. (young), non Linné.

Shell rounded, oval or irregular in form; beaks small, pointed, not quite reaching the margin; substance of the shell scaly, consisting of numerous overlapping layers of pearly material resembling talc, of a greenish tinge in living specimens—this substance in dead

shells is rubbed off, showing the golden and silvery hues of the real surface; upper valve convex, lower valve flat, with an ovate aperture which reaches the margin by a fissure. Diameter about one inch.

Habitat from Maine to Florida, but rare and local north of Cape Cod. It is sometimes very abundant in R. I. and at other times quite rare. Generally in the fall months it is seen adhering to small stones between tides at Opponang in Greenwich Bay, but during the rest of the year it is rare to find one near the shore, its station being among oyster beds. When growing upon the valves of *Pecten irradians*, as it does sometimes, the *Anomia* conforms to the shape of the Pecten and is ribbed like that species.

The *Anomia ephippium* of Linnæus is a very common European shell, and the great naturalist was deceived in our American shell, supposing it to be the same species, and called it by the same name, giving as its habitat, Pennsylvania. All authors since have known it under that name, even down to Dall's revision of the Mollusca of Mass., Mar. 16, 1870, but Prof. A. E. Verrill has shown it to be a distinct species and named it *Anomia glabra*, V., Am. Jour. Sci., iii, 213, 1872.

The shell described in Binney's Gould, second edition, under the name of *Anomia electrica*, Linné, is found among oysters and is distinguished from *A. glabra* by its sulphur yellow color, its defined edge and its very convex upper valve. It is generally distorted, semi-transparent and not so scaly as the preceding species. I think it is merely a variety, and the variety is much more common with us than the type.

Family *Ostreidae*.

The oysters commenced in the Carboniferous and are found in every age since the present time. Some of the fossil oysters are two feet in length. Of the living species, the most peculiar in its habitat is the tree oyster, which grows upon the roots of the mangrove. There is but one genus in this family and about 70 species.

212. *Ostrea borealis*, Lam.

Syn.: *Ostrea Canadensis*, Brug, Lam, Hanley.

213. *Ostrea Virginica*, Lam.

Syn.; *Ostrea Virginiana*, Lister, Sby, Gld.; *O. rostrata maxima*, Chem.; *O. elongata*, Solander.

These two species are so variable in shape that it is impossible to give an accurate description of them. They are very irregular and inequivalve, the larger valve generally attached to some object and the smaller one moving forward as the shell grows. *O. borealis* is obliquely rounded ovate, with short curved beaks, while *O. Virginica* is long and narrow, with long and pointed beaks. In both species the large valve is the lower one and the upper valve is the smallest, flatter and smoother; surface of *borealis* flaky, greenish, that of

Virginica somewhat lead color. Interior chalky or greenish white, with a dark violet muscular impression in the centre.

A. Virginica sometimes attains a length of twelve to fifteen inches, but seldom over three inches in breadth, while in *borealis* the breadth is about one-half the length; specimens six inches in length are about three in breadth.

Oysters have many enemies, among which are sponges, star-fish, drills and man. The drills or borers, *Urosalpinx cinerea*, are extremely abundant in our bay, and can destroy a great many oysters in a short time.

Ostrea edulis of Europe is considered by some authors to be identical with our northern oysters. I cannot see enough resemblance in either shell or animal to agree with them. Experienced oyster-eaters can tell the difference between *borealis* and *Virginica* instantly by the taste, having no knowledge whatever of the shells. Having tried to eat English, Scotch, French and Dutch oysters, judging from that standpoint I could never believe they were the same species as the *Ostrea borealis*, the finest eating oyster in the world.

[The following species were omitted in their proper place:]

175. *Pisidium variabile* Prime.

Shell heavy, oblique inequilateral, inflated, anterior longer, narrower and angulated at the end; beaks full, prominent, not approximating at the apex; valves solid, interior light blue; epidermis glossy, color variable, straw or greenish-brown, with a yellow zone on the basal margin; cardinal teeth united; lateral teeth short and strong. Length $\frac{2.1}{1.00}$, height $\frac{1.8}{1.00}$, breadth $\frac{1.7}{1.00}$ inch.

Described by Temple Prime in Proc. Bost. Soc. Nat. Hist., IV, 163, 1851. Inhabits the Eastern and Middle States. A very common species found in nearly all small streams.

176. *Pisidium Virginicum* Gmelin.

Shell thick, oblique, very inequilateral, coarse and robust in appearance; anterior rounded, posterior broader, subtruncated at the extremity, beaks large; valves solid, interior light-blue; epidermis greenish-brown to chestnut, with zones of a darker shade; hinge margin curved; cardinal teeth two, shaped like the letter V reversed; lateral teeth short and strong. Length $\frac{3.5}{1.00}$, height $\frac{2.9}{1.00}$, breadth $\frac{2.1}{1.00}$ inch.

This is one of the largest species of *Pisidium* in America. It inhabits running streams in New England and Canada, and throughout the Middle States, and in a few of the Western States. Say, in 1819, described this shell under the name of *Cyclas dubia*, and it is generally known to collectors under this name, but Mr. Prime has shown it to be identical with one described by Gmelin, in 1788, as *Tellina Virginica*; he, therefore, changes the name to its present one as adopted above.